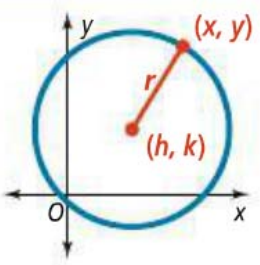
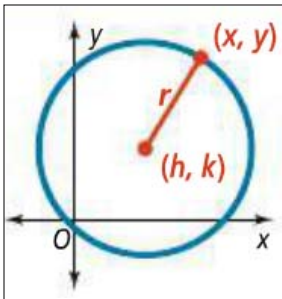
Circles--continued!



The equation of a circle with center at point (h,k) and radius r is

$$(x-h)^2 + (y-k)^2 = r^2$$

Mar 20-11:29 PM



$$(x-h)^2 + (y-k)^2 = r^2$$

Center at (3,4):

$$(x-3)^2 + (y-4)^2 = r^2$$

Center at (-2,-5):

$$(x+2)^2 + (y+5)^2 = r^2$$

Note that the offset from the origin is subtracted from x and y in this equation! So we subtract positive offsets (right or up) and "add" (subtract a negative) negative offsets (left or down).

Mar 20-11:29 PM

$$(x-7)^2+(y+2)^2=64$$

Suppose this equation represents the coverage area for a cell phone tower. How would we graph it?

1. Where is the center?

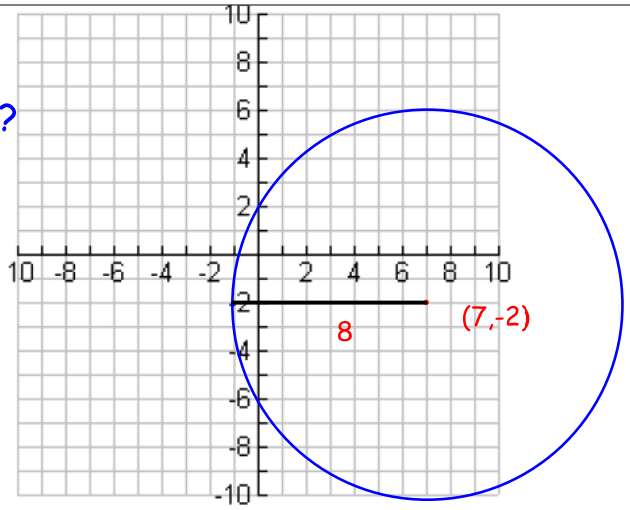
2. What is the radius?

Mar 20-11:43 PM

$(x-7)^2+(y+2)^2=64$

1. Where is the center?
Point (7,-2).

2. What is the radius?
The radius is 8.



Mar 20-11:43 PM

1. What is the equation of a circle with a center at (-1,2) and radius 4.

Equation:

2. What is the equation of a circle with a center at (2,3) and radius 2

Equation:

3. What is the equation of a circle with a center at (-4,3) and radius 5

Equation:

Mar 21-12:24 AM

1. Draw a circle with a center at (-1,2) and radius 4.

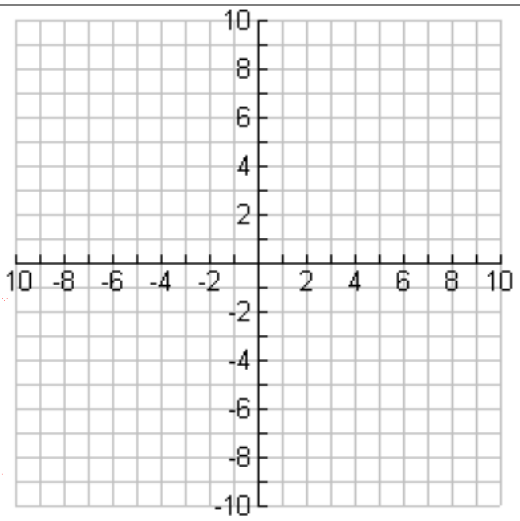
Equation:

2. Draw a circle with a center at (2,3) and radius 2

Equation:

3. Draw a circle with a center at (-4,3) and radius 5

Equation:



Mar 21-12:24 AM